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Religious Determinants of Academic Attainment in the Netherlands

ANNEBERT DIJKSTRA AND JULES L. PESCHAR

In its function of incorporating new generations into our culture, schooling is linked closely with a worldview and philosophy of life. Associated with the transfer of culture, religious and moral values are tightly entwined with our beliefs regarding education. This connection between moral and religious considerations and views on the content and shape of an educational system underlies debates over issues such as the place and nature of moral and religious education within national curricula, the demand for religious socialization in schools, and the accommodation of demands by cultural and religious minorities, and can be seen as a substantial factor in shaping education systems.

For much of their history, the educational systems of western Europe could be characterized as systems of mono-integration, predominantly serving the interests of, and controlled by, one dominant group, the church.¹ With the development of the nation-state and rising industrialization in the nineteenth century, however, this religious predominance faced increasing challenges. The state, with an interest in political integration and social control, gradually strove to establish a national educational system under its authority. This battle between religious and secular elites resulted in roughly three types of educational systems.² The first is characterized by complete state control over education. A second variation is a national system with uniform regulations in which the dominant religious group has a substantial operational role. A third category, of which the Netherlands is an example, contains several school sectors allowed to function within a set of uniform national restrictions. Among these broad categories, substantial differences evolved regarding the religious or neutral orientations of public schools and the establishment of private reli-

We would like to thank R. J. Bosker for his valuable contribution to the analyses reported here, as well as H. P. Brandsma for the use of the BDF data, and A. J. A. Felling for his help in constructing the parent questionnaire. Also, we would like to acknowledge Mary Roach and Steve Grant for their editing work. An earlier version of this article was presented at the joint session Education and Religion of the research committees Sociology of Education and Sociology of Religion at the Thirtieth World Congress of Sociology, July 18–23, 1994, in Bielefeld, Germany.

¹ M. S. Archer, *Social Origins of Educational Systems* (London: Sage, 1977).

² See H. Knippenberg and H. H. van der Wusten, "The Primary School System in the Netherlands 1900–1980," *Tijdschrift voor Economische en Sociale Geografie* 2 (1984): 177–85.

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gious education. Within this context, the religious heterogeneity of the population and the political power of the religious elite are critical factors in shaping educational systems.³ In nations that are relatively homogeneous religiously, for instance, public schools generally include religious socialization, often accompanied by minor state provisions supporting private education. In countries where religious resistance to a neutral national education system was unsuccessful, opportunities for private education and governmental funding of private schools became key issues. Although different in size and in the conditions under which they operate, and dependent on the political power of the religious elite, systems of state-funded private religious schools developed alongside the nonreligious public sector in such nations.

Among these countries, the Netherlands is in a unique position. With several religious groups balancing one another, as opposed to nations with one dominant church, a religious coalition provided the political power to create a diverse system of private religious schools, which soon outstripped public education. In terms of size, financial conditions, and regulation of private schools, the Dutch school system demonstrates religion's potential importance in the formation of education systems.⁴

Regarding the insights into the effects of religion on educational achievement, however, the Dutch case can also be considered as a specific one. Besides the relationship between religious and moral values and the formation of national education systems, the link between religion and education as instrument of selection and transfer of knowledge is also an important topic.

Findings on higher academic outcomes for students at private religious schools have been reported for England, Israel, Scotland, the United States, and the Netherlands.⁵ Although sufficient explanations for this relationship are lacking, several variables, such as governance structure, value systems, and the competition for students among schools locally or regionally, have been examined.⁶ The influence of religion and educa-

³ Ibid.

⁴ See, e.g., S. Karsten, "Verzuiling als sociaal en politiek verschijnsel," in *Verzuiling in het onderwijs: Actuele verklaringen en analyse*, ed. A. B. Dijkstra, J. Dronkers, and R. H. Hofman (Groningen: Wolters-Noordhoff, forthcoming).

⁵ See, e.g., P. Mortimore et al., *School Matters: The Junior Years* (Somerset: Open Books, 1988); A. Ygeev and M. Chen, "Sponsorship as School Charter: Educational Mobility in Religious versus Secular Schools in Israel," *International Review of Modern Sociology* 15, no. 1 (1985): 117–30; A. McPherson and J. D. Willms, "Certification, Class Conflict, Religion, and Community," in *Research in Sociology of Education and Socialization* (1986), 6:227–302; J. S. Coleman and T. Hoffer, *Public and Private High Schools* (New York: Basic, 1987); and P. Van Laarhoven, B. Bakker, J. Dronkers, and H. Schijf, "Some Aspects of School Careers in Public and Nonpublic Primary Schools," *Tijdschrift voor Onderwijsresearch* 11, no. 2 (1986): 83–96.

⁶ See, e.g., R. H. Hofman, *Effectief schoolbestuur* (Groningen: Institute for Educational Research RION, 1993); A. S. Bryk, V. E. Lee, and P. B. Holland, *Catholic Schools and the Common Good* (Cambridge, Mass.: Harvard University Press, 1993); and J. Roeleveld and J. Dronkers, "Bijzondere scholen of buitengewone scholen?" *Mens en Maatschappij* 69, no. 1 (1994): 85–108.

tional achievement has also been explored at the family level. When religion is an important force regarding the shape and content of educational systems, to what extent does the religious background of students affect one of the major functions of schooling—the transfer and distribution of knowledge? In the past, for instance, such a connection was made between literacy and the spread of Protestantism.⁷ For the Netherlands, H. Knippenberg explains regional differences in educational participation during the last century by examining religious factors.⁸

Generally speaking, our knowledge about the relationship between religion and academic achievement is modest, and remarkable enough, this also seems to be the case for the Netherlands. Despite an educational system marked by religious diversification and an ongoing debate about the desirable shape of that system,⁹ questions regarding the effect of religious factors on academic achievement continue to receive only minor attention. That is remarkable not only because religion was a substantial force in the Dutch educational system as well as an important criterion for social stratification in the Dutch society, but also because recent research indicates that religious background is still linked to substantial differences in profiles of schools.¹⁰

Against this framework, the Netherlands offers a fruitful case to explore the potential effects of religion on the nonreligious domains of schooling. Our expectation is that religious orientations and practices in and of themselves influence both the socialization and academic achievement of children. In the empirical part of this article, we concentrate specifically on the connection between the first and last elements of this causal chain by directly investigating the extent to which students' educational outcomes are linked with the religious characteristics of their families of origin. Systematic differences between the educational opportunities of religious and nonreligious groups, as well as among diverse religious groups, will also be examined.

Historical and Theoretical Background

Pillarization and Secularization in the Netherlands

The history of Dutch private religious schools is closely entwined with *verzuiling*, or “pillarization”—a process resulting in parallel, segregated

⁷ See, e.g., L. Stone, “Literacy and Education in England,” *Past and Present* 42, no. 1 (1969): 69–139; K. A. Lockridge, “Literacy in Early America,” in *Literacy and Social Development in the West*, ed. H. J. Graff (Cambridge: Cambridge University Press, 1981), pp. 183–200.

⁸ See H. Knippenberg, *Deelname aan het lager onderwijs in Nederland gedurende de negentiende eeuw* (Amsterdam: Koninklijk Nederlands Aardijkskundig Genootschap, 1986).

⁹ See Commissie Aanpassing Scholenbestand, *De school voor de samenleving* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1994); Commissie Scholenbestand en Maatschappelijke Pluriformiteit, *Advies van de Commissie Scholenbestand en Maatschappelijke Pluriformiteit* (Den Haag: Nederlandse Katholieke Schoolraad, 1994).

¹⁰ See B. A. N. M. Vreeburg, *Identiteit en het verschil: Levensbeschouwelijke vorming en het Nederlands voortgezet onderwijs* (Amsterdam: Universiteit van Amsterdam, 1993).

organizational complexes, structured along religious lines and active in the secular domains of life—that has become increasingly marked since the turn of the century. This pillarization has led to more or less isolated groups living separately, each within its own “pillar,” containing political parties, organizations for employers and employees, health and welfare services, the media, and education.¹¹ The battle for control over and funding of education, which peaked in the decades around the turn of the century, was an important catalyst for this process. Convinced that the Christian character of public schools was being diluted, in the nineteenth century supporters of religious education strove to establish their own schools. After “freedom of education” became an amendment of the 1848 constitution, the conflict shifted to governmental funding for private schools. The “Pacification” of 1917, which constitutionally provided for the public financing of private religious schools, finally ended this struggle. In these events, religious contrasts have strongly affected the structure of the Dutch school system as it exists today.¹²

As figure 1 shows, a turning point in the distribution of pupils by sector came in the 1920s. The number of private school pupils, which had not exceeded a quarter of the total until well after 1850, had risen by 20 percent near the time of the Pacification and has fluctuated around 70 percent of all primary pupils since the mid-1940s, due primarily to a large Protestant and a slightly larger Catholic group. Correspondingly, the proportion of pupils attending public schools declined from approximately 75 percent in 1870 to about 30 percent in 1940, more or less stabilizing at that point. In 1992, 32 percent of pupils attended public schools, while 68 percent were in private institutions.

After the pillarization of Dutch society peaked around 1960, its cultural and religious domains experienced considerable change, and an extensive process of secularization began.¹³ Religious consciousness, behavior, and institutions all became sharply less relevant in the public domain. This is evident, for example, in a strong decline in church membership—estimated at 30–50 percent of the total population in the second half of the 1980s and declining since.¹⁴ This drop, which is among the

¹¹ Analyses of the pillarization in the Netherlands are given by, among others, A. Lijphart, *The Politics of Accommodation: Pluralism and Democracy in the Netherlands* (Berkeley: University of California Press, 1968); E. H. Bax, *Modernization and Cleavage in Dutch Society: A Study of Long-Term Economic and Social Change* (Avebury: Aldershot, 1990).

¹² For a somewhat extended summary of the historical background of the pillarized Dutch education system, see E. James, “Public Subsidies for Private and Public Education: The Dutch Case,” in *Private Education: Studies in Choice and Public Policy*, ed. D. C. Levy (New York: Oxford University Press, 1986), pp. 113–37.

¹³ See, e.g., A. Felling, J. Peters, and O. Schreuder, *Dutch Religion: The Religious Consciousness of the Netherlands after the Cultural Revolution* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1991).

¹⁴ J. W. Becker and R. Vink, *Secularisatie in Nederland, 1966–1991* (Rijswijk: Social and Cultural Planning Office, 1994).

RELIGIOUS DETERMINANTS IN DUTCH SCHOOLS

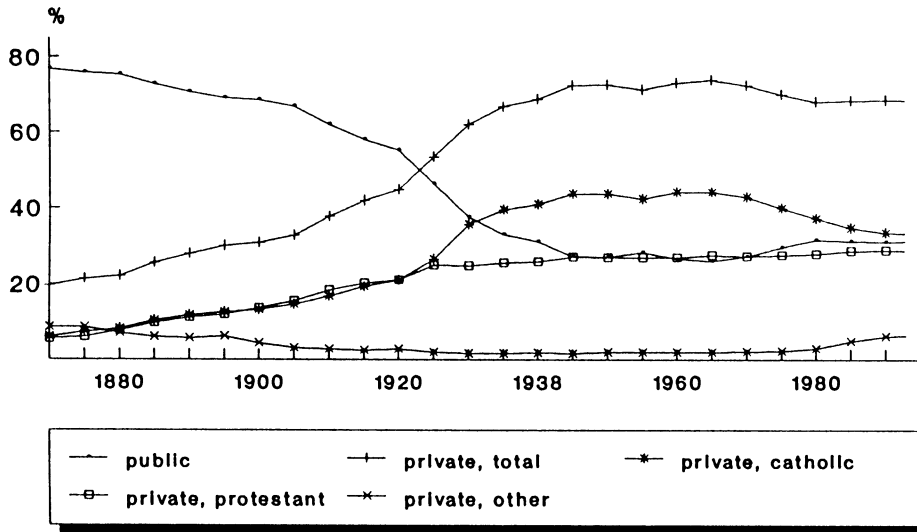


FIG. 1.—Enrollment of student population by sector of school for primary education, 1870–1992. Source: Onderwijsverslagen, based on M. De Kwaasteniet, *Denomination and Primary Education in the Netherlands* (Amsterdam: Koninklijk Nederlands Aardrijkskundig Genootschap, 1990), and Educational Statistics, Central Bureau of Statistics.

most notable in Western societies,¹⁵ is expected to continue.¹⁶ Further evidence for the decrease of religion's importance in the Netherlands rests in parallel findings regarding church attendance and orthodoxy for those who still belong to a church.¹⁷

This does not mean, however, that the religious factor has left the stage. Though the reduced importance of religion is unmistakable, research nevertheless points to its continuing social relevance. Traditional religion appears to be an important force within the family,¹⁸ in politics,¹⁹ and in connection with moral issues and middle-class attitudes.²⁰ In international comparisons, the Netherlands distinguishes itself for its strong

¹⁵ Compare P. Ester, L. Halman, and R. de Moor, *The Individualizing Society: Value Change in Europe and North America* (Tilburg: Tilburg University Press, 1993).

¹⁶ Compare Th. Schepens, *Kerk in Nederland: Een landelijk onderzoek naar kerkbetrokkenheid en kerkverlating* (Tilburg: Tilburg University Press, 1991).

¹⁷ Compare Becker and Vink.

¹⁸ See, e.g., A. Felling, J. Peters, and O. Schreuder, *Geloven en leven: Een nationaal onderzoek naar de invloed van religieuze overtuigingen* (Zeist: Kerkebosch, 1986).

¹⁹ See, e.g., P. P. Everts, *Public Opinion, the Churches and Foreign Policy* (Leiden: Institute for International Studies, 1983); R. Eisinga, A. Felling, and J. Lammers, "Confessie, inkomen en politieke partijkeuze, 1964–1992," *Mens en maatschappij* 69, no. 1 (1994): 6–25.

²⁰ See, e.g., L. G. M. Spruit, *Religie en abortus: Interactiemodellen ter verklaring van de houding tegenover abortus* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1991); M. ter Voert, *Religie en het burgerlijk-kapitalistisch ethos: Een onderzoek naar de relatie tussen religieuze overtuigingen en opvattingen over arbeid, consumptie en eerlijkheid* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1994).

decline in church membership, as well as relatively strong church involvement within the religious segment of the population. This also indicates the considerable meaning that must still be attributed to religion.²¹

Religion and School Success

Religion is important in social life, but we are especially interested in its meaning for schooling. Leaving aside religious socialization, to what extent does religion specifically affect educational outcomes? Research on the relationship between scholastic achievement and the religious environment in which primary socialization takes place is limited. Andrew Greeley, after analyzing the link between denomination and the educational levels of parents and their children in the United States based on large-scale survey data collected during the 1960s and 1970s, concluded that remarkable differences in educational mobility existed among religious groups, with Catholics experiencing the most, followed by Jews.²² Likewise, M. A. Najmi reported positive results for Catholic students, while controlling for socioeconomic status.²³ More recently, James Coleman and Thomas Hoffer also demonstrated better educational outcomes for students from Catholic families. Based on longitudinal data from high school sophomores and seniors in 1980 and 1982 at both Catholic and public schools, higher verbal and mathematics achievement scores were found for Catholic students and students who attended church more often. Also, attendance at religious services was associated with lower drop-out levels.²⁴

Data concerning 7,000 American respondents from national surveys in the 1970s form the basis for an observation by C. W. Mueller of a weak but significant effect of religion on the number of years of schooling attained by both girls and boys, while controlling for background characteristics. While the strongest effect was found in the Jewish group, relatively favorable results also were reported for Protestants. No changes in time were found.²⁵ C. Hirschman and L. M. Falcon analyzed the educational performance of religioethnic groups for the late 1970s and early 1980s using these same surveys. Although emphasizing the role played by socioeconomic factors in differences among these groups, independent effects of religious background on the number of years spent in education

²¹ L. Halman, *Waarden in de westerse wereld: Een internationale exploratie van de waarden in de westerse samenleving* (Tilburg: Tilburg University Press, 1991).

²² A. M. Greeley, *Ethnicity, Denomination, and Inequality* (Beverly Hills, Calif.: Sage, 1976).

²³ M. A. Najmi, "Religion, Socioeconomic Status, and Educational Aspirations," *Education and Urban Society* 1 (August 1969): 453–68.

²⁴ Coleman and Hoffer (n. 5 above).

²⁵ C. W. Mueller, "Evidence on the Relationship between Religion and Educational Attainment," *Sociology of Education* 53 (July 1980): 140–52.

were also reported.²⁶ Using survey data for the period between 1980 and 1990, W. Sanders reported effects of both religion and ethnicity on educational attainment, as indicated by completed years of schooling while controlling for family characteristics. Although there were indications of declining effects for men, the link between religion and educational attainment for women seems to persist.²⁷

Although the religious diversity that existed in the Netherlands near the turn of the century still largely determines the structure of Dutch education, knowledge about the impact of the religious factor on educational outcomes is limited. Research by M. Matthijssen and G. Sonnemans in the 1950s showed a lower participation at the upper levels of secondary education among Catholics, which could largely be explained by the social class differences between religious groups.²⁸ In the 1960s, F. Van Heek found that students from lower socioeconomic backgrounds with religious parents more often attained higher levels of secondary education.²⁹ In the Year by Year study, the educational careers of a group of students who left elementary school in 1965 were followed longitudinally. The effects of religious background on primary-education test scores and on the transition to secondary education largely disappeared when social background was controlled.³⁰ For students in the lower tracks of secondary education, however, an interaction appeared with regard to the extent to which boys, as compared with girls, obtained a certificate.³¹ These findings applied equally to differences between religious and nonreligious students, as well as among religious groups themselves.³² A more recent Dutch analysis by R. J. Bosker and A. Dijkstra compared a national sample with data for students from an orthodox Protestant family background and found no significant differences in educational attainment of males and females between both groups.³³

To summarize, findings overall thus far indicate that the relationship between religion and educational success is modest. Yet there has been

²⁶ C. Hirschman and L. M. Falcon, "The Educational Attainment of Religio-Ethnic Groups in the United States," *Research in Sociology of Education and Socialization* 5 (1988): 83–120.

²⁷ W. Sanders, "The Effects of Ethnicity and Religion on Educational Attainment," *Economics of Education Review* 11, no. 2 (1992): 119–35.

²⁸ M. A. J. M. Matthijssen and G. J. M. Sonnemans, *Schoolkeuze en schoolsucces bij VHMO en ULO in Noord-Brabant* (Tilburg: Zwijsen, n.d.).

²⁹ F. Van Heek et al., *Het verborgen talent: Milieu, schoolkeuze en schoolgeschiktheid* (Meppel: Boom, 1968).

³⁰ J. A. Kropman and J. W. M. Collaris, *Van jaar tot jaar: Eerste fase* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1974).

³¹ J. W. M. Collaris and J. A. Kropman, *Van jaar tot jaar: Tweede fase* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1978).

³² P. Jungbluth, *Docenten over onderwijs aan meisjes* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1982).

³³ R. J. Bosker and A. B. Dijkstra, "Gender and Religion as Determinants of Educational Opportunities?" (in press).

little theoretical groundwork in this area. These modest insights into the role of religion in education definitely apply to the pillarized Dutch educational system. Within the Netherlands, with its large private religious school sectors, religion can be characterized as a "forgotten" variable.³⁴

A Religious Factor in Academic Achievement

Considerable research has been conducted on the determinants of educational achievement. A central line in this research has been aimed at family background. Different hypotheses proposed to explain the relationship between social background and educational opportunities have been essentially interpreted as elaborations of a more general model of socialization.³⁵ In this model, a causal relationship is assumed between parental social status and educational orientations on the one hand and children's opportunities for successful school careers on the other.³⁶ According to this model, the status position of parents is particularly concentrated on socioeconomic and cultural dimensions.³⁷

Some critics have argued, however, that the conventional model is not sufficiently multidimensional.³⁸ In this context religion takes on a new importance.³⁹ A study by D. F. Alwin and D. J. Jackson illustrates the potential relevance of this criticism. They found that, in addition to parental characteristics such as level of education and family income, religious background also has a significant and independent effect on parents' educational orientation.⁴⁰ As a result, it seems fruitful to follow an approach in which the causal linkage from parental characteristics to socialization to scholastic achievement is extended to include the religious dimension of social positions. Based on theories of status-specific socialization, religious background plausibly influences educational performance through the socialization process.

We here focus directly on the empirical relationship between the first and last elements of such a model of religious-specific socialization. We thus concentrate on the extent to which differences exist in the educa-

³⁴ A. B. Dijkstra and P. Van Laarhoven, "Een religieuze factor in opvoedingsstijlen?" *Sociologische Gids* 37, no. 5 (1990): 320–32.

³⁵ See, among others, B. Bernstein, *Class, Codes and Control* (London: Routledge, 1971); P. Bourdieu and J. C. Passeron, *Reproduction in Education, Society and Culture* (London: Sage, 1977); and M. L. Kohn, *Class and Conformity: A Study in Values* (Chicago: University of Chicago Press, 1977).

³⁶ See V. Gecas, "The Influence of Social Class on Socialization," in *Contemporary Theories about the Family*, ed. W. R. Burr et al. (New York: Free Press, 1979), 1:365–404.

³⁷ P. Bourdieu, *Distinction: A Social Critique of the Judgement of Taste* (London: Routledge, 1984).

³⁸ See J. A. A. Van Doorn, "Het probleem van de beroepsstratificatie," *Sociologische Gids* 2, no. 2 (1955): 88–93.

³⁹ See, e.g., H. Bertram, *Sozialstruktur und Sozialisation: Zur mikrosoziologischen Analyse von Chancenungleichheit* (Darmstadt: Luchterhand, 1981).

⁴⁰ D. F. Alwin and D. J. Jackson, "The Statistical Analysis of Kohn's Measures of Parental Values," in *Systems under Indirect Observation: Part I*, ed. K. G. Jöreskog and H. Wold (Amsterdam: North-Holland, 1982), pp. 197–223.

tional performances of students from different religious groups, and also the extent to which different operationalizations of parental religious positions show effects.

Data and Variables

Analyses were conducted on 1,778 students in Dutch primary and secondary education, with the data set based on a national sample survey of 200 private and public elementary schools. As part of a study on school effectiveness, data had been collected on a variety of characteristics of these schools, as well as the performance of the students in grades 7 and 8 in 1986–87 and 1987–88, respectively.⁴¹

As part of a study on the influence of religion on distribution processes in education, additional information about these students was collected in 1990 via a parental questionnaire. For the present analysis, students' school careers during the first years after the transition to secondary education were mapped, and their socioeconomic, cultural, and religious background characteristics were measured.⁴²

Religion may refer to a variety of domains, including the belief in an ultimate reality, subscription to religious doctrines, or participation in religious activities. Ch. Y. Glock, for example, distinguishes experiential, ritualistic, ideological, intellectual, and consequential dimensions of religion.⁴³ In order to represent religion's diverse dimensions, our analyses embody a wide operationalization of religious background. To this end, instruments recently tested as part of the study *Secularization and Depillarization in the Netherlands* were included in our 1990 parent questionnaire.⁴⁴ Given that a Christian worldview is still dominant in the Netherlands, we restrict ourselves to the traditional Christian religion.⁴⁵ Our constructs will thus refer to dimensions of the Christian worldview, church membership and participation, and the salience of religion.

Socioeconomic and cultural background characteristics are important predictors of school success. To give an accurate estimate of religion's meaning in education, these background traits must be taken into account. In our analysis, parental educational level is a proxy for the family's socioeconomic and cultural status. This measure is based on the so-called

⁴¹ For a detailed description of this data set, see H. P. Brandsma, *Basisschoolkenmerken en de kwaliteit van het onderwijs* (Groningen: Institute for Educational Research RION, 1993).

⁴² A full description of this set of data is given by A. B. Dijkstra and J. L. Peschar, *Effects of Denomination on Opportunities in Education* (Groningen: Department of Sociology, in press).

⁴³ R. Stark and Ch. Y. Glock, *American Piety: The Nature of Religious Commitment* (Berkeley: University of California Press, 1968).

⁴⁴ A. Felling, J. Peters, and O. Schreuder, *Religion in Dutch Society 85: Documentation of a National Survey on Religious and Secular Attitudes in 1985* (Amsterdam: Steinmetz Archive, 1987).

⁴⁵ Felling et al., *Geloven en leven* (n. 18 above).

SOI classification of the Dutch Central Bureau of Statistics,⁴⁶ and involves a recoded ordinal variable consisting of three categories.

As a general indicator of academic attainment, our dependent variable is the level of education near the end of the first stage of secondary education, 3 years after the transition to secondary school (when the student is 14 or 15 years of age). The construction of the variable coincides with the structure of the Dutch educational system. Between the ages of 4 and 11, children attend primary schools, which consist of eight grades. They then move to one of the four types of secondary education. These main types, hierarchically ordered from lowest to highest, are junior vocational education (LBO, duration of 4 years), lower general secondary education (MAVO, 4 years), higher general secondary education (HAVO, 5 years), and preuniversity secondary education (VWO, 6 years). Transition to a higher track leads to the loss of 1 year (an LBO certificate gives right of entry to the fourth grade of MAVO, an HAVO certificate allows entry in the fifth grade of VWO, and so on). Based on the student's actual grade and level (type of school: LBO, MAVO, HAVO, VWO), the original variable is recoded into five categories so that the differences among the categories can be interpreted as the difference in the number of years required to reach the top of the Dutch educational system: entry to university.

Analysis

Indicators of Religion

At issue is the relationship between religious background and educational attainment, and specifically the effects of diverse indicators of religion. We distinguish three indicators, or their combinations, of a traditional Christian view about the meaning of life.

An important dimension of religion is the interpretation of and belief in an ultimate reality, often associated with religious institutions that symbolize this supernal order. The extent to which one feels connected to such institutions is the first dimension distinguished. The construct of church membership and participation describes the extent to which one was brought up in and still belongs to a religious environment. This variable is based on seven questions concerning the church membership of respondents and their parents, as well as their participation in religious activities (such as fulfilling special tasks within the church, attending church services, or tuning in to religious radio and television programs). Based on these questions, we devised a classification ranging from "second generation of unchurched" to "core church member" (see table 1).⁴⁷

⁴⁶ Central Bureau of Statistics, *Standaard Onderwijs Indeling SOI-1978* (Voorburg: Central Bureau of Statistics, 1987).

⁴⁷ See Felling et al., *Religion in Dutch Society* 85 (n. 44 above).

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TABLE 1
PERCENTAGES OF STUDENTS BY PARENTAL CHURCH
MEMBERSHIP AND PARTICIPATION

Church Membership and Participation	%
Second generation unchurched	10.7
First generation unchurched	9.2
Former church members	16.7
Total unchurched	36.6
Marginal church member	21.5
Modal church member	22.8
Core church member	19.0
Total church members	63.3

NOTE.—*n* = 1,699.

The construct of Christian worldview, the second dimension, relates to the extent to which Christian belief shapes views about the existence of an ultimate reality and the meaning of life, as well as the extent to which a Christian meaning is attached to suffering and death and good and evil. This construct is based on nine items, such as "There is a God who occupies Himself with every human being personally," and "God takes care that good will finally overcome evil."⁴⁸ Each of these items received a score on a six-point scale, of which five categories (ranked between "agree entirely" and "don't agree at all") were used in the constructed variable (see table 2).⁴⁹ In the variable included in the analysis, the scores have been reduced to three classes. The reliability of the construct is comparable to that in the original study.⁵⁰

The third dimension concerns the extent to which religion influences everyday attitudes and behavior, the construct "salience of religion." This construct is based on items such as, "My Christian religion has much influence on my daily life"⁵¹ and is scored on a six-point scale, of which

⁴⁸ The remaining items were formulated as "There is a God who wants to be God for us," "There is a God who revealed Himself in Jesus Christ," "There is a God who's Kingdom will come," "To me, life is meaningful only because there exists a God," "One can bear a lot of pain during illness, if one believes in God," "According to me, sorrow and suffering only have a meaning if you believe in God," and "All the good in the world finally comes from God." For details, see Felling et al., *Religion in Dutch Society* 85.

⁴⁹ The category "never thought about" has been interpreted as a missing score. For a more detailed description of the construction of this variable, see A. Felling, J. Peters, and O. Schreuder, "Gebroken identiteit: Een studie over christelijk en onchristelijk Nederland," *Jaarboek van het Katholiek Documentatie Centrum* 11 (1981): 25–81.

⁵⁰ Cronbach's alpha = .95, compared to .97 in the sample of Felling et al., *Religion in Dutch Society* 85.

⁵¹ The remaining items were formulated as "If I have to make important decisions, my Christian religion plays a major part in it," "My Christian religion has much influence on my political ideas," "If I had no Christian religion, my life would be quite different," and "Christian religion is something I am very much interested in." For details, see Felling et al., *Religion in Dutch Society* 85.

TABLE 2
PERCENTAGES OF STUDENTS BY PARENTAL AGREEMENT WITH CHRISTIAN
WORLDVIEW AND SALIENCE OF RELIGION

	Christian Worldview	Salience of Religion
1 Disagreement	6.5	7.8
2	24.2	28.4
3	34.1	33.7
4	24.5	23.3
5 Strong agreement	10.7	6.8

NOTE.—For variable Christian worldview, $n = 1,220$; salience of religion, $n = 1,456$.

five categories (from “agree entirely” to “don’t agree at all”) were used in the constructed variable (see table 2).⁵² The variable included in the analysis is the sum score of the five composing items, reduced to three categories. Regarding reliability, there is no difference between the original and our measurement.⁵³

Determinants of Educational Opportunities

Besides the question about the relationship between religion and educational achievement, we are particularly interested in the weight attached to the diverse operationalizations of religion, when the influence of the other indicators is computed. In order to control for socioeconomic and cultural background characteristics, the educational levels of the parents are included in the analysis. To assess the various roles of religion’s different dimensions, as well as the importance of socioeconomic and cultural background characteristics, tables 3A and 3B summarize the results of an analysis of covariance.⁵⁴ In the lower part of each table, the contribution by each independent variable to the explained variance of the dependent variable appears. At the top of each table, the results of the multiple classification analysis are presented. Controlling for the other factors in the model, for each category of independent variables the adjusted mean score is given. This provides an impression about the direction and strength of the effects of the religion variables, which can be interpreted as the average score for each category, after deducting the effects of the model’s other factors.

The analysis was executed in several steps, beginning with the computation of the mean educational outcome (3.39) for the entire group. Then in

⁵² The category “never thought about” has been interpreted as a missing score. For a more detailed description of the construction of this variable, see *ibid.*

⁵³ Cronbach’s alpha = .88 and .89, respectively, for our and the original construct in the sample of Felling et al. (*ibid.*).

⁵⁴ We used the option ANOVA of the SPSS package (M. J. Norusis, *Base Manual SPSS/PC* [Chicago: SPSS Inc., 1988]).

the unadjusted baseline model for all variables, the deviation from the grand mean is given for each category. This shows whether educational performances differ for the subgroups without, however, calculating the influence of other variables. The variable church membership and participation in particular shows some differences. Relatively low outcomes are found for the unchurched of the first and second generation, with the mean educational level for the latter being 3.12 ($3.39 - 0.27$). For the categories modal and core church members, however, the respective outcomes are near (0.01) and above (0.10) the overall mean score. Thus, the somewhat lower attainments for the first and second generation unchurched seem to be reflected by a somewhat higher educational level for the modal and core church members. The highest average scores, however, are realized in the group of former church members ($3.39 + 0.17 = 3.56$).

The differences are smaller for the dimensions of salience of religion and adhering to the Christian worldview. With regard to the educational level of the parents, considerable differences are also found between the average educational position of students in the lowest and highest categories of parents' education.

Next, the differences between the educational outcomes are estimated while simultaneously accounting for the effects caused by other variables. In table 3A, possible bias of the parents' educational level is central, while table 3B focuses on possible connections between the different indicators of religion. In the final model all variables are included.

In order to check the extent to which the influence of religion is contaminated by an effect of parental educational background, different religion constructs are estimated together with the parents' level of education in Models I–III. The first model combines the variables church membership and participation and parents' education, Model II consists of salience of religion and parents' education, while Model III includes Christian worldview and parents' education. There does not seem to be a bias introduced by parents' education since only minor differences appear after the introduction of this variable with respect to the earlier unadjusted effects for the religion variables. The betas also show a stable picture. Some change seems to appear only for salience of religion as the result of parents' education.

To examine whether the effects of religion change when other dimensions of the religious factor are taken into account, Model IV consists of the variables church membership and participation and salience of religion. Although a slight change appears compared to the unadjusted differences, the effects remain generally constant. Regarding educational outcomes, this leads to the conclusion that the variables church membership and participation and salience of religion refer to diverse domains of the religious factor in education.

TABLE 3A
COVARIANCE ANALYSIS OF STUDENTS' EDUCATIONAL POSITION, BY PARENTAL RELIGION

	Unadjusted	Adjusted Means		
		Model I	Model II	Model III
Grand mean: 3.39 (SD: 1.14)				
Church membership and participation:				
2d generation unchurched	-.27	-.27		
1st generation unchurched	-.11	-.09		
Former member	.17	.14		
Marginal member	-.04	-.03		
Modal member	.01	.02		
Core member	.10	.09		
Salience of religion:				
1 Lowest	.06		.05	
2	.00		-.01	
3 Highest	-.08		-.05	
Christian worldview:				
1 Lowest	-.13			-.11
2	.03			.03
3 Highest	.09			.07
Level of education:				
1 Lowest	-.37	-.35	-.28	-.35
2	-.05	-.05	-.07	-.07
3 Highest	.39	.36	.34	.35
Betas:				
Church membership and participation	.11	.10		
Salience of religion	.05		.03	
Christian worldview	.08			.07
Level of education	.21	.19	.18	.19
Multiple R ²		.05	.03	.04
Main effects:		11.60(.00)	11.71(.00)	12.84(.00)
Church membership and participation		3.40(.05)		
Salience of religion			.86*(.42)	
Christian worldview				2.77*(.06)
Level of education		30.28(.00)	21.64(.00)	21.88(.00)
Interaction effects:				
Level of education × church membership		.51*(.88)		
Level of education × salience			.81*(.52)	
Level of education × Christian worldview				.89*(.46)

NOTE.— F -values in parentheses. Included variables: Model I: level of education \times church membership, Model II: level of education \times salience, Model III: level of education \times Christian worldview.

* Nonsignificant effects ($p > .01$).

RELIGIOUS DETERMINANTS IN DUTCH SCHOOLS

TABLE 3B
COVARIANCE ANALYSIS OF STUDENTS' EDUCATIONAL POSITION, BY PARENTAL RELIGION, CONTINUED

	Adjusted Means			
	Model IV	Model V	Model VI	Model VII
Church membership and participation:				
2d generation unchurched	-.29	-.50		-.45
1st generation unchurched	-.07	-.27		-.18
Former member	.21	.04		.07
Marginal member	-.04	-.01		.03
Modal member	.01	.11		.11
Core member	.04	.20		.09
Salience of religion:				
1 Lowest	.04		.16	.10
2	.00		-.00	-.02
3 Highest	-.05		-.23	-.13
Christian worldview:				
1 Lowest		-.25	-.25	-.27
2		.01	.05	.02
3 Highest		.22	.08	.22
Level of education:				
1 Lowest				-.28
2				-.08
3 Highest				.31
Betas:				
Church membership and participation	.11	.18		.15
Salience of religion	.03		.14	.08
Christian worldview		.17	.16	.18
Level of education				.17
Multiple R^2	.02	.03	.02	.07
Main effects:	2.86(.00)	5.38(.00)	5.81(.00)	6.73(.00)
Church membership and participation	3.50(.00)	6.04(.00)		4.15(.00)
Salience of religion	.48*(.62)		7.84(.00)	2.32*(.09)
Christian worldview		9.73(.00)	9.64(.00)	9.66(.00)
Level of education				15.18(.00)
Interaction effects:				
Church membership \times salience		1.24*(.26)		
Church membership \times Christian worldview			.72*(.70)	
Salience \times Christian worldview				.08*(.98)

NOTE.—*F*-values in parentheses. Included variables: Model IV: church membership \times salience, Model V: church membership \times Christian worldview, Model VI: salience \times Christian worldview, Model VII: all variables.

* Nonsignificant effects ($p > .01$).

Model V contains the construct of church membership and participation and the variable Christian worldview. When contrasted with the unadjusted results in the baseline model in table 3A, the adjusted means for both factors change considerably. Both betas also appear to have almost doubled (.18 and .17, respectively). Apparently, if religious involvement and a Christian worldview are considered separately, the effect of both variables is underestimated. In a comparison between the baseline model

and Model VI—in which the effects of both Christian worldview and salience of religion are included—a similar conclusion is drawn. This suggests that simultaneous variation in the extent to which the salience of religion and the traditional Christian doctrines are adhered yields intensified effects on educational attainment.

Tables 3A and 3B underline the hypothesis of a relationship between religion and school success. The average educational outcome of students from families in the first and second generation of unchurched is one-to two-quarters of a standard deviation lower than that of students from families of modal and core church members. This can be seen in Model VII, which contains all indicators of religion together with the parental educational background. The variable Christian worldview shows a similar effect. Differences in the mean level of educational achievement between the extreme categories of this variable come to about half a year ($-.27$ and $+.22$) of learning gain. The strength of both effects runs in the same direction (betas $.15$ and $.18$, respectively) as that established for the influence of social background, indicated by the educational level of the parents. Considering the finding that the less salient the character of religion the higher the mean educational attainment score, a less consistent pattern emerges regarding the third indicator of religious background. Compared with the constructs worldview and religious involvement, however, salience of religion seems to be a minor dimension (beta $.08$ and F -value not significant) of the religious factor.

Sector of the School

What has been left out so far is the fact that religion is not only a characteristic of individual students but also a structural factor in Dutch education. Although the relevance of this religious element has declined considerably,⁵⁵ religious diversity remains an important and structuring characteristic of the Dutch schools. Different academic outcomes for students attending schools belonging to different religious sectors show that this structural aspect of religion also seems to affect the distribution of educational opportunities.⁵⁶ Although we will not deal here with the relationship between academic attainment and the religious sector of the school as such,⁵⁷ the possible interference of sector effects must be accounted for to obtain a reliable estimate of the influence of the student's religious background. For that reason, an analysis was conducted estimating the effects of a religious family background together with the effects of the denomination of the school.

⁵⁵ A. B. Dijkstra, "Naar een model voor schoolkeuze: Hoe kiezen ouders een school?" in *Jaarboek christelijk onderwijs*, ed. S. Miedema and H. Klifman (Kampen: Kok, 1995).

⁵⁶ Van Laarhoven et al. (n. 5 above).

⁵⁷ For an overview, see A. B. Dijkstra, *De religieuze factor* (Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen, 1992).

Considering the use of nested data with variables at both the individual and school levels, we used a multilevel model.⁵⁸ In the first step of the analysis, the attained level of education of student i 3 years after the transition to secondary school is modeled as a function of the average achievement in school j and the students' socioeconomic background indicated by parental education. In addition to the variables used in the earlier analysis of covariance, two indications for the effect of prior achievement on the level of education were added: the scores on standardized mathematics and language tests taken in the last grade of primary school. In Model II the effect of Christian worldview was tested, this being one of the indications of religion showing the strongest effects. Using dummy variables, the effect of both a medium and high Christian worldview was contrasted with the lowest adherence to traditional Christian doctrines.

In Model III the main effects of the sector of the school are shown by means of two dummy variables, which offer an estimate of the effect of Catholic and Protestant schools, respectively, with public schools as a contrast group. Considering that much of the variance in student attainment during elementary school already is accounted for by the prior achievement variables for language and mathematics, the control for possible effects of the sector of the school is focused on the denomination of secondary education.

The results of this multilevel analysis are shown in table 4. The starting point is the zero model. From the table's bottom block it appears that the greater part by far of the total variation in educational positions is between students within schools. In Model I students' level of education is predicted on the basis of the parents' level of education and students' test scores for language and mathematics. In Model II the effect of a Christian worldview is added to the analysis. We are actually dealing with two tests, in which the effects of a moderate and of a high adherence to a Christian worldview are compared with little or no support to the traditional Christian belief system. As the table shows, only for a strong adherence to a Christian worldview is a significant effect on educational outcomes found, while the difference between the lowest and moderate categories is not significant. Following our argument, this somewhat reduced effect of Christian worldview compared to the results of the previous analysis might be caused by an influence of religion on prior achievement, here reflected in the language and mathematics test scores.

Finally, Model III considers the effect of the sector of the school. Although the effect of religion at the student level disappears as part of

⁵⁸ We used the package HLM (Hierarchical Linear Modeling). See A. S. Bryk, S. W. Raudenbush, and R. T. Congdon, *HLM2 and HLM3: Computer Programs and Users' Guide* (Chicago: University of Chicago, 1993).

TABLE 4
MULTILEVEL ANALYSIS EFFECT OF CHRISTIAN WORLDVIEW ON STUDENTS' EDUCATIONAL POSITION

	Model 0	Model I	Model II	Model III
Intercept	3.44 (.04)	.62 (.16)	.68 (.16)	.53 (.17)
Parents' level of education		.16 (.05)	.16 (.05)	.15 (.05)
Students' prior achievement, language		.10 (.01)	.10 (.01)	.10 (.01)
Students' prior achievement, math		.06 (.01)	.06 (.01)	.06 (.01)
Christian worldview: Moderate			.11* (.07)	.10* (.07)
High			.14 (.07)	.09* (.07)
Sector of the school: Catholic				.11* (.09)
Protestant				.01* (.10)
Variance components:				
Between students	1.20	.62	.62	.62
Between schools	.06	.09	.09	.08

NOTE.—Standard errors in parentheses.

* Nonsignificant effects ($p > .05$).

the step that includes the sector of the school, no significant effects of school sector are found. No significant differences exist in educational positions for students attending Catholic and Protestant schools 3 years after they have entered secondary education.

Discussion

When we consider our findings, they as yet give no cause for discarding the assumption that religion affects educational outcomes. The level of education of students with diverse religious backgrounds clearly differed. In particular, religious involvement and church membership of parents, as well as the extent to which traditional Christian religious doctrines are adhered to, appear to be dimensions on which different outcomes are established. The pattern turned out to be diffuse with regard to our assessment of the salience of religion for the students' parents.

The mechanisms causing such effects are unclear. Do religious attitudes lead to a climate that positively affects academic achievement, or should religious effects basically be understood as traditional forces, enforcing and preserving middle-class norm systems? To what extent is the

content of the religious belief system important, and to what degree are doctrinal differences linked with different outcomes? Are there differences among Christian denominations, as well as among different religious systems? Under what circumstances can negative effects be expected?

The theoretical insights about links between religion and educational opportunities are limited. For a cogent theoretical framework to emerge, knowledge of the factors affecting learning and schooling is a useful starting point. To explore the extent to which religious doctrines and religious-directed attitudes and behavior might enhance or constrain educational conditions, a causal model must be developed. Such a model would specify the mechanisms by which religious characteristics might influence educational outcomes.

The Dutch case shows the importance of a model that not only allows for the influence of religion at the individual level, but also acknowledges effects at the school level. Although our analysis does not indicate a strong effect by the religious sector of the school, other studies point to different academic results for schools with different denominational backgrounds. At the same time, however, the results of our multilevel analysis demand further inquiry into the relationship between students' religious background and the sector of the school.

Besides suggesting an urgent need for further theoretical work, our findings also indicate the potential usefulness of a more extended empirical reconstruction of the meaning of the religious factor for educational opportunities. Both further analysis of relevant characteristics of religious background and investigation of religion's effects in specific school and family settings are important. Our results particularly suggest that further research is required on the interactions among the different dimensions of religious background. Also needing attention are the effects of possible interactions between religion and other background variables, such as socioeconomic status and cultural orientation, and the interactions between students' religious background and the denomination of the school.